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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,045	12/13/2001	John Herbert Stevens	PU010301	6251

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EXAMINER

SHANG, ANNAN Q

ART UNIT	PAPER NUMBER
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2623

MAIL DATE	DELIVERY MODE
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11/15/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/020,045

Applicant(s)

STEVENS ET AL.

Examiner

Annan Q. Shang

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 19-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 and 19-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Miscellaneous

1. Please note that the Examiner of record for prosecution of this application has changed.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 05/30/07 has been entered.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Tsuchida (2002/0194593)** in view of **Karlton et al. (5,835,717)** and further in view of **Estipona (7,263,711)** and further in view of **Beard (6,172,712)**.

As to claim 1, **Tsuchida** discloses a system (STB 152a, figs.1-3) for

automatically switching to an interactive application during commercial breaks in video programming comprising: an interactive application module (¶ 57) capable of executing an interactive application program ("browser", ¶ 71) and generating output data ("web pages", id.); a video program module (network interface 300, fig.3) that generates a video program signal (¶ 51); an input module (remote control unit 158, figs. 1-2) for entering user input commands into the interactive application module (7 53); a break detection module adapted to detect a commercial break in the video program signal (7 60) and generate a break beginning signal (7 73); a display module ("display engine", 7 66) having a primary display area capable of receiving the video program signal and the interactive application output data and displaying a primary display image corresponding to either the video program signal or the interactive application output data (id.); and a switching module that switches the primary display image to the interactive application output data upon receiving the break beginning signal (7 73) so that upon detecting the beginning of a commercial break, the interactive application output data is automatically presented in the primary display area (77 91, 93, 94).

Tsuchida further discloses storing the video program during part of the period when the interactive application and the second interactive application is being used and playing back the stored information in the primary area when the interactive application is terminated ([0088-0091], [0094] and [0111-0113]).

Tsuchida does not disclose automatically saving and restoring a user's progress in operation of the interactive program upon activation and termination of a second interactive application, as claimed.

However, in an analogous art, **Karlton** discloses a system that, upon activation of a second interactive application, automatically saves a user's progress in the operation of said interactive program in a memory as to allow the user to use a second interactive application, and restoring said user's progress of said interactive program by accessing said memory to retrieve information corresponding to said user's progress (col. 5, line 40 - col. 6, line 32). Karlton further discloses that the disclosed system enables the user to leave a particular application-state temporarily and return at a later time (col. 1, lines 50-64, col. 6, lines 35-63).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Tsuchida to automatically saving a user's progress in the operation of said interactive program in a memory upon activation of a second interactive application and restore said user's progress of said interactive program by accessing said memory, as taught by Karlton, for the benefit of providing convenience to the user.

Tsuchida as modified by Karlton fail to explicitly teach automatically switching back to the display the video program at the end of the commercial break unless the user enables an override command at the time of the switching operation as to continue the operation of the interactive application until the interactive application is terminated.

However, note the **Estipona** reference discloses a terminating enhanced TV broadcasts that provides the user and the TV system control of the TV display by automatically switching back to the display the video program at the end of the commercial break unless the user enables an override command at the time of the

switching operation as to continue the operation of the interactive application until the interactive application is terminated (figs.1-5, col.3, line 29-col.5, line 1+).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention to incorporate the teaching of Estipona into the system of Tsuchida as modified by Karlton to permit the user control the displaying of either content (continuing the viewing of the in-progress TV program or interactive application) as desired.

Tsuchida as modified by Karlton and Estipona, fail to explicitly teach dropping frames of video from the stored information until the video program can be presented in real time only when the operation of the interactive application lasts longer than the period of time corresponding to the beginning of the commercial break and the end of the commercial break.

However, note the **Beard** reference figures 1-2, discloses TV with hard disk drive for storing TV program for later playback, where if the initial pause of viewing is sufficiently brief, the system drops frames to enable the user to catch-up with the in-progress TV after resuming (col.1, line 52-col.2, line 11, line 46-col.3, line 23 and col.6, line 14-col.7, line 1+).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention to incorporate the teaching of Beard into the system of Tsuchida as modified by Karlton and Estipona to monitor the user's interaction as to the duration between pausing/resuming of TV program to permit the TV system to decide if it is

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necessary to catch-up with the in-progress TV program or to continuing storing the in-progress TV program for later viewing or playback as desired.

As to claim 2, Tsuchida in view of Karlton discloses the system of claim 1 wherein the break detection module is further adapted to generate a break end signal either " automatically upon detecting or determining the end of a television commercial break or manually upon a viewer's election, wherein the switching module switches the primary display image back to the video program signal upon receiving the break end signal so that the video program signal is presented in the primary display area (Tsuchida, ¶¶ 95, 96).

As to claim 3, Tsuchida in view of Karlton teaches the system of claim 1 wherein the video program module is a television receiver (receives cable television signal; Tsuchida, ¶ 51).

As to claim 4, Tsuchida in view of Karlton discloses The system of claim 1 wherein the interactive application program is an internet browser program (Tsuchida, ¶ 71).

As to claim 5, Tsuchida in view of Karlton teach the system of claim 1 wherein the input module (158) is a hand-held controller (Tsuchida, figs.1, 2).

As to claim 6, Tsuchida in view of Karlton discloses the system of claim 2 wherein the interactive application module comprises: a program memory for storing the interactive application program (Tsuchida, fig.3,330a); a central processing unit (id., 310) which executes the interactive application program in accordance to the user input commands; an input command interface (id., 157) for receiving the user input

commands from the input module and transferring the user input commands to the central processing unit; said memory for storing a user's point of progress in executing the interactive application program (Karhon: col. 4, lines 5-7, col. 5, lines 59-67); and a data output means for outputting image and sound data in accordance with the execution of the interactive application program (Tsuchida, figs. 1, 2, TV 154).

As to claim 7, Tsuchida in view of Karlton discloses the system of claim 6 wherein a user's point of progress in executing the interactive application program is automatically stored in the memory when the switching module switches the primary display image to the television program signal (Karlton, col. 5, lines 26-30), wherein execution of the interactive application program is resumed from the user's stored point of progress in the memory when the switching module switches the primary display image back to the interactive application output data (id., lines 30-35).

As to claim 8, Tsuchida in view of Karlton discloses the system of claim 6 wherein the input command interface is an infrared photosensor and the input module is one or more hand held remote controllers which emit infrared signals (Tsuchida, ¶ 43).

As to claim 9, Tsuchida in view of Karhon discloses the system of claim 6 wherein the program memory is an integrated circuit (Tsuchida, ¶ 122).

As to claim 10, Tsuchida in view of Karlton discloses the system of claim 6 wherein the program memory is a local memory connected to a remote program source that stores a multitude of interactive application programs (Tsuchida, ¶ 71), wherein the system comprises means to download interactive application programs from the remote program source to the local memory (Karlton, col. 4, lines 52-62).

As to claim 11, Tsuchida in view of Karlton discloses the system of claim 10 wherein the means to download is connected to the internet (Tsuchida, ¶ 71).

As to claim 12, Tsuchida in view of Karlton discloses the system of claim 10 wherein the selection and downloading of specific interactive application programs from the remote program source to the internal memory device is controlled by the input commands entered by the user via the input module (Karlton, col. 4, lines 56-62).

As to claim 13, Tsuchida in view of Karlton discloses the system of claim 1 further comprising means to deactivate the switching module and to manually select either the video program signal or the interactive application output data as the primary display image (Tsuchida, ¶ 75).

As to claim 14, Tsuchida in view of Karlton discloses the system of claim 1 wherein the display module is a television or a computer monitor having a display screen (Tsuchida, TV 154).

As to claim 15, Tsuchida in view of Karlton discloses the system of claim 14 wherein the primary display area can be the entire display screen of the television or computer monitor or can be an area constituting a majority of the display screen in televisions and computer monitors with picture-in-picture capabilities (Tsuchida, ¶¶ 66-69).

As to claim 16, Tsuchida in view of Karlton discloses the system of claim 1 wherein the display module is a television or computer monitor with picture-in-picture capability having a secondary display area for displaying a secondary display image in addition to the primary display area for presenting the primary display image, wherein

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the switching module switches the displays of the primary display image and the secondary display image between the television program signal and the interactive application output data so that the television program is presented as the primary display image and the interactive application is displayed as the secondary display image until the beginning of a commercial break is detected, whereupon the detection of the beginning of a commercial break the interactive application output data is presented as the primary display image and the television program signal is displayed as the secondary display image until the end of the commercial break is detected, whereupon the detection of the end of the commercial break the television program signal is presented as the primary display image and the interactive application output data is displayed as the secondary display image (Tsuchida, ¶¶ 66-69, 75).

5. Claims 17 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Tsuchida** in view of **Allen et al (2003/0041331)** and further in view of **Estipona (7,263,711)**.

Regarding claim 17, Tsuchida discloses the claimed steps as applied to the system of claims 1-16, above. In addition, Tsuchida discloses that received information corresponding to said video program is stored during part of the period when said interactive application is being used, and playing back said stored information in said primary area when said interactive application is terminated (¶ 76).

Tsuchida does not disclose dropping at least one frame of video from said stored information until said video program can be presented in real time.

However, in an analogous art, Allen discloses a system and method of storing a video program while executing an interactive application (§ 88) and playing back the stored program when the application is terminated, dropping at least one frame of video from the stored program until said video program can be presented in real time (§§ 92-94). Allen further discloses that this function enables a user to "catch up" with the real-time signal if desired.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Tsuchida to include dropping at least one frame of video from said stored information until said video program can be presented in real time, as taught by Allen, for the benefit of providing convenience to the user.

Tsuchida as modified by Allen fail to explicitly teach automatically resuming to the display the video program at the end of the commercial break unless the user enables an override command at the time of the switching operation as to continue the operation of the interactive application until the interactive application is terminated.

However, note the **Estipona** reference discloses a terminating enhanced TV broadcasts that provides the user and the TV system control of the TV display by automatically switching back to the display the video program at the end of the commercial break unless the user enables an override command at the time of the switching operation as to continue the operation of the interactive application until the interactive application is terminated (figs.1-5, col.3, line 29-col.5, line 1+).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention to incorporate the teaching of Estipona into the system of Tsuchida

as modified by Karlton to permit the user control the displaying of either content (continuing the viewing of the in-progress TV program or interactive application) as desired.

As to claim 22, Tsuchida in view of Allen discloses the claimed method (see Tsuchida as applied to claim 16, above).

6. Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Tsuchida** in view of **Allen** and **Estipona** as applied to claim 17 above, and further in view of **Karlton**.

As to claim 19, Tsuchida in view of Allen, Estipona and Karlton discloses the method of claim 17 wherein the interactive application module comprises: a program memory for storing the interactive application program; a central processing unit which executes the interactive application program in accordance to the user input commands; an input command interface for receiving the user input commands from an input module and transferring the user input commands to the central processing unit; a memory for storing a user's point of progress in executing the interactive application program; and a data output means for outputting image and sound data in accordance with the execution of the interactive application program (see Tsuchida and Karlton as applied to claims 1 and 6, above).

As to claim 20, Tsuchida in view of Allen, Estipona and Karlton discloses the method of claim 19 further comprising the step of automatically storing a user's point of progress in executing the interactive application program in the pause memory when

the television program is presented in the primary display area, wherein execution of the interactive application program is resumed from the user's stored point of progress in the memory when the interactive application is presented in the primary display area (see Tsuchida and Karlton as applied to claim 7, above).

As to claim 21, Tsuchida in view of Allen, Estipona and Karlton discloses the method of claim 19 wherein interactive application programs are downloaded to and stored locally in the program memory (see rejection of claim 10, above).

Response to Arguments

7. Applicant's arguments with respect to claims 1-17 and 19-22 have been considered but are moot in view of the new ground(s) of rejection. The amendment to the claims necessitated the new ground(s) of rejection discussed above. This office action is non-final.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Zigmond et al (6,698,020) discloses techniques for intelligent video ad insertion.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Annan Q. Shang** whose telephone number is **571-272-7355**. The examiner can normally be reached on **700am-400pm**.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Christopher S. Kelley** can be reached on **571-272-7331**. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the **Electronic Business Center (EBC)** at **866-217-9197 (toll-free)**. If you would like assistance from a **USPTO Customer Service Representative** or access to the automated information system, call **800-786-9199 (IN USA OR CANADA)** or **571-272-1000**.

A handwritten signature in black ink, appearing to read 'Annan Q. Shang', with a stylized flourish at the end.

Annan Q. Shang